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Long-term Unemployment in the Canadian Labor Market:

A Longitudinal Perspective

By MATTHEW ROBERTSON*

ABSTRACT. Examination of the distribution of *long-term unemployment* in the *Canadian labor market* employing longitudinal administrative *unemployment insurance data* for the *1975-79 period* indicates that over relatively long time periods, unemployment tends to be concentrated among those who have multiple unemployment episodes over *time*. By implication, high unemployment spell frequencies indicate a high propensity for *re-employment*. A great deal of long-term unemployment is found in *lower skilled occupations* and in *seasonal occupations* and *industries*. *Youth* and *adult women* comprise a proportion of long-term unemployed roughly commensurate with their share of the labor force.

I

Introduction

THE DISTRIBUTION OF UNEMPLOYMENT in industrialized countries tends to be concentrated among a minority of individuals who experience extensive periods of time unemployed. Using weekly longitudinal unemployment insurance data¹, this paper discusses some of the major features of long-term unemployment and its distribution among certain demographic groups, regions and occupations in Canada. Such information is valuable not only in assessing the distribution of the hardship of unemployment but also in identifying disadvantaged workers who experience extensive or severe unemployment over time and for developing effective labor market policies and programs. It is only by looking at the labor market behavior of individuals over time that the microeconomic foundations of unemployment experience can be properly understood.

As noted by Akerlof and Main², unemployment may be viewed within a stock-flow framework. For instance, an 8½ percent unemployment rate could be consistent with a labor force wherein each person is unemployed one month of

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the year (a pure flow model) or a situation where one-twelfth of the labor force is unemployed all year (a pure stock model). If long-duration unemployment tends to be concentrated among a relatively small group over time, as the recent literature on unemployment would indicate, then the labor market's unemployment may be considered to approach a pure stock phenomenon. One of the purposes of the paper is to assess the position of the Canadian labor market in the stock-flow spectrum.

II

Overview

DURING THE 1970s, unemployment came to be increasingly viewed as a dynamic phenomenon. A number of studies using gross flow labor market data showed

Table 1. - Duration and Distribution of Unemployment by Spell
Frequency: Canada, 1975-79

Number of Spells over 1975-79 Period	Frequency (percent of sample)	Average Duration per Spell (weeks)	Percent of Total Unemployment
1 - 3	70.0	18.6	47.7
4 - 6	25.7	17.1	43.1
>6	4.3	13.8	9.2

Source: Department of Employment and Immigration (Ottawa), Canadian Longitudinal Labour Force File (LLFF). Calculations are based on longitudinal unemployment insurance information and refer basically to weeks collecting regular UI benefits. Sample size is 19,414.

that the pool of unemployment is continually changing with large numbers of individuals entering and leaving employment and unemployment each week. The typical unemployment spell was found to be quite short. Companion theories of the turnover view of unemployment also became prevalent, particularly search and contract theories, which emphasize that turnover in the labor market is largely the result of rational or optimizing decisions on the part of individuals and firms. Turnover, contract and job search theories, which tend to minimize the social consequences of unemployment, have not gone unchallenged. More

recent research into the nature of unemployment has focussed more on its distribution, including studies by Clark and Summers, and Disney, among others.³

While recognizing that there is a lot of movement in the labor market, these studies have shown that unemployment among important labor market groups tends to be concentrated in a relatively small number of individuals. They question, for instance, whether the youth/adult unemployment rate differential can be attributed to rapid turnover by youth and indicate that the youth job problem is one involving a relatively small proportion of the labor force. This minority experiences extended periods of long-term unemployment which is not the result of such factors as high job turnover or employment in seasonally-oriented industries.⁴ While the existing research on the distribution of unemployment duration clearly indicates that it is significantly concentrated, it has been difficult to identify in terms of a manageable set of characteristics and whether it persists over long time periods among the same individuals.

It should perhaps be pointed out that those who have been associated with the turnover view of unemployment do not necessarily deny that unemployment may be concentrated in a relatively few individuals. For instance, Robert Hall⁵ has noted that the true problem of core unemployment is that certain individuals in the labor force account for a disproportionate share of unemployment because they move from one unsatisfactory job to another.

This raises the important issue of the relationship between turnover or unemployment spell frequency and unemployment concentration. What existing studies have shown is that relatively few people tend to spend a great deal of time unemployed for given periods. However, unemployment concentration could be the result of relatively few individuals experiencing multiple spells of unemployment over a given period and spending a great deal of time unemployed in the process.

The empirical issue then is whether most unemployment is found among individuals in one long spell (or a few long spells) or is concentrated among those who experience a relatively large number of spells over a given period. Examining data for the U.S., Bowers⁶ did not find much evidence to suggest that a large majority of persons who accumulate a lot of unemployment do so in one long protracted spell. The evidence in this study for the Canadian labor market (presented below) would indicate that over relatively long periods, unemployment tends to be concentrated among individuals who have multiple spells of unemployment. A great deal of long-term unemployment is found in seasonal occupations and industries. Young persons comprise a proportion of long-duration unemployment roughly commensurate with their share of the labor force (sample).

III

Distribution of Unemployment by Spell Frequency

OWING TO THE ALMOST UNIVERSAL NATURE of the unemployment insurance program in Canada, one is able to generate representative unemployment histories of individuals over time. Unemployment is measured by weeks drawing unemployment insurance benefits.⁷ The data used in this study are based on random subsamples drawn from the Longitudinal Labor Force File (LLFF) of Employment and Immigration Canada and refer to completed spells of unemployment.

Table 2. - The Age Distribution of Unemployment by Spell Frequency:
(1) Young Persons 15-19 and (2) Older Workers 30-44

SPELLS	PFRQ		AVGWKS		AVGDUR		PTDUR	
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
1	29.1	31.4	19.3	18.6	19.3	18.6	11.6	11.8
2	25.6	19.8	37.4	37.2	18.7	18.6	19.8	14.8
3	18.3	14.9	56.1	54.7	18.7	18.2	21.3	16.4
4	12.6	12.8	72.9	71.6	18.2	17.9	19.0	18.5
5	7.4	9.7	89.1	84.5	17.8	16.9	13.7	16.6
6	4.4	5.8	98.4	88.0	16.4	14.7	9.0	10.3
> 6	2.5	5.6	110.7	102.5	14.7	13.5	5.7	11.6

Legend: (1) = 15-19 age group; (2) = 30-44 age group;
 SPELLS = the number of spells an individual had in 5-year period;
 PFRQ = the percentage of the total number of people;
 AVGWKS = the average number of weeks of unemployment per person;
 AVGDUR = the average duration of a spell;
 PTDUR = the percentage of the total duration of unemployment of group.

Source: See Table 1.

Initially a sample of longitudinal data for the 1975-79 period of about 20,000 was drawn. It was found that a considerable proportion of unemployment is accounted for by individuals who have relatively few spells of unemployment over time. For instance, in Table 1, we see that, over the 1975-79 period, those individuals who had three spells of unemployment or less accounted for 47.7 percent of total unemployment. Less than 10 percent of unemployment was accounted for by individuals with more than six unemployment spells over the period. In the aggregate at least this is not suggestive of chronic turnover difficulties when considering that a certain amount of turnover reflects a 'normal' transition period before re-employment. This is consistent with the findings of

Clark and Summers who note that “. . . data from March 1975 work experience survey, which show that those with more than twenty-six weeks of unemployment spent about nine months unemployed, and averaged twenty-three weeks per spell . . . [indicate that] extensive unemployment does not arise through an accumulation of brief spells of unemployment between jobs.” Data from the 1980 Canadian Annual Work Patterns Survey⁸ also indicate those who spent in excess of 26 weeks unemployed had 1.5 spells of unemployment on the average. Also, in 1980, the average time unemployed for those who were unemployed in excess of 50 percent of the time (26 weeks) was 32.2 weeks or 9.6 months for an average of about six months per spell.

While Table 1 indicates that there are a large number of individuals who have one or two spells, a considerable amount of total unemployment is accounted for by those individuals who had multiple spells of unemployment. The data indicate that a great deal of unemployment is concentrated in those individuals who have multiple unemployment spells. About 30 percent of the sample had four or more spells, accounting for about one-half of all unemployment. As will be shown later, a great deal of long-duration (core, extensive) unemployment is found among individuals with multiple unemployment spells, rather than a single or few protracted spells.

On a more disaggregated level, a number of significant results should be noted. Youth and adult workers had basically the same distribution of unemployment by spell frequency. If anything, older workers have proportionately more unemployment experience concentrated in individuals with multiple spell frequencies (Table 2). About 34 percent of adults 30–44 years had more than three spells over the 1975–79 period, accounting for about 57 percent of all unemployment for the group. For young persons 15–19, 27 percent had more than three spells, comprising 47 percent of unemployment for that group.⁹ The main point is that young persons do not appear to exhibit greater turnover than older workers, when unemployment is viewed over relatively long periods of time¹⁰. This tends to question the meaningfulness of the frequent empirical observation that one of the major sources of difference in the youth-older worker unemployment rate is employment instability¹¹.

There is a pronounced difference in the distribution of unemployment by spell frequency between men and women. Data for males tend to have a greater proportion of their unemployment experience concentrated in those individuals who experienced several spells of unemployment over the 1975–79 period (Table 3), reflecting their relative concentration in high turnover occupations, notably construction and primary occupations. Approximately 35 percent of these males had 4 or more spells over the five-year period, accounting for 58 percent

Table 3 - Characteristics of the Distribution of Unemployment by Spell Frequency in Canada: Percent of Total Persons (1) and Percent of Total Duration of Unemployment (2) for the 1975-79 Period

Class	SPELLS						Average Number of Spells per Person
	1 - 3		4 - 6		≥ 6		
	(1)	(2)	(1)	(2)	(1)	(2)	
Age:							
15-19	73.0	52.6	24.4	41.6	2.6	5.8	2.7
20-24	74.7	55.9	22.2	39.5	3.1	6.8	2.6
25-29	72.3	49.9	23.5	40.4	4.2	9.7	2.6
30-34	66.0	43.1	28.3	45.4	5.7	11.5	2.9
45+	61.7	37.9	31.4	48.9	6.9	13.2	3.1
Sex:							
Male	65.4	41.8	29.3	47.1	5.5	11.1	3.0
Female	79.7	61.0	18.0	33.7	2.3	5.5	2.3
Occupation:							
Management/ Administration	92.6	81.2	6.5	16.9	1.0	1.9	1.7
Medicine	90.7	77.6	8.6	21.8	0.7	0.6	1.8
Clerical	85.1	69.7	13.5	26.8	1.4	3.5	2.1
Sales	86.7	72.0	12.6	27.0	0.7	1.0	2.0
Service	74.7	55.7	22.6	38.8	2.7	5.5	2.6
Forestry	31.8	16.1	52.6	63.3	15.6	20.6	4.4
Processing	62.3	38.0	32.1	50.4	5.6	11.6	3.1
Machining	66.6	46.3	28.8	43.5	4.6	10.2	2.9
Fabrication/ Assembly	69.1	50.1	27.1	42.0	3.8	7.9	2.8
Construction	52.3	31.4	39.1	53.4	8.6	15.2	3.6

Transportation	58.1	36.1	35.2	50.4	6.7	13.5	3.2
Equipment							
Material	64.4	46.0	30.7	45.9	4.9	8.1	3.0
Handling							
<u>Industry:</u>							
Forestry	39.1	21.5	50.4	63.2	10.5	15.3	4.1
Manufacturing	68.0	46.1	27.1	43.9	4.9	10.0	2.9
Construction	50.9	30.1	39.9	53.9	9.2	16.0	3.6
Transportation	71.6	48.1	23.4	40.1	5.0	11.8	2.7
Trade	80.8	61.9	17.6	33.9	1.6	4.2	2.3
Finance	85.5	70.0	12.3	24.9	2.2	5.1	2.1
Service	77.4	57.9	20.2	36.8	2.4	5.3	2.4
Public							
Administration	69.2	45.2	25.5	43.7	5.3	11.1	2.8
<u>Province:</u>							
Newfoundland	52.6	36.5	39.1	50.0	8.1	13.0	3.5
Prince Edward Island	58.8	37.6	32.2	46.7	8.6	14.4	3.3
Nova Scotia	63.0	43.3	32.1	48.2	4.6	8.2	3.0
New Brunswick	53.1	32.7	39.5	55.0	7.0	12.0	3.5
Quebec	63.9	43.8	30.3	45.9	5.4	10.2	3.0
Ontario	74.8	54.4	21.6	38.1	3.2	7.5	2.5
Manitoba	79.7	58.0	18.2	36.3	1.7	4.7	2.3
Saskatchewan	76.3	54.0	21.2	39.3	2.2	6.4	2.4
Alberta	85.3	66.0	13.4	30.8	0.9	2.8	2.1
British Columbia	73.3	53.0	21.8	58.4	4.4	10.3	2.6

Source: See Table 1.

of total male unemployment. On the other hand, 20 percent of females had 4 or more spells accounting for 39 percent of total group unemployment duration. Overall, it would appear that men experience unemployment more frequently over time periods, and that a relatively greater proportion of their unemployment is experienced by those who have several (as opposed to a few) spells.

However, it should be noted that, in the aggregate, women account for about one-third of total unemployment experienced over the period, roughly in proportion to their numbers in the sample. On an industry basis, forestry, other primary sectors, and construction had a relatively greater percentage of unem-

Table 4. - Distribution of Time Spent Unemployed by Spell Frequency, 1975-79

Spell Frequency	Percentage of Time Unemployed							Total
	0-5	5-10	10-20	20-30	30-40	40-50	50+	
1 - 2	38.6 (89.9)	23.5 (77.5)	27.6 (59.8)	8.0 (31.4)	2.4 (14.4)	- (0.5)	- -	56.5
3 - 4	7.1 (9.7)	10.9 (21.2)	28.7 (36.5)	24.6 (56.8)	16.7 (59.2)	8.5 (55.0)	3.5 (30.4)	33.1
5+	1.0 (0.4)	2.2 (1.3)	9.3 (3.7)	16.3 (11.8)	23.8 (26.4)	22.1 (44.5)	25.3 (69.6)	10.4
TOTAL	24.3	17.1	26.1	14.4	9.3	5.1	3.8	100.0

Source: See Table 1. Sample size is 103,196 of which 22,260 (20 percent of sample) spent more than 30 percent of the time unemployed over the five year period. Column 1 and row totals sum to 100. They indicate for instance that 56.5 percent of the sample had 1-2 spells over the 1975-79 period. Also, 24.3 percent of the individuals in sample spent 0-5 percent of the time unemployed. The figures in parentheses sum vertically to 100. For example, those individuals who had 1-2 spells of unemployment over the period accounted for 89.9 percent of all those who spent 0-5 percent of the time unemployed over the period.

ployment in higher frequency spells. This is not unexpected, and tends to reflect to a certain degree the seasonal nature of these industries. Occupationally, construction, farming and forestry occupations, and to a lesser but still significant extent processing and transportation occupations, had a substantial proportion of unemployment concentrated among those who had 5 or more spells over the 1975-79 period (average at least one unemployment spell per year). It is interesting to note that clerical, sales and service occupations were characterized by relatively few spells over the period.

IV

The Distribution of Long Term Unemployment by Spell Frequency

AS NOTED ABOVE, a great deal of long duration unemployment is accounted for by individuals with multiple spells of unemployment. For example, of those who spent in excess of 30 percent of the time unemployed over the 1975–1979 period, 93 percent were accounted for by those individuals who had 3 or more spells or 20 percent of the sample (Table 4). About 40 percent were accounted for by individuals with 5 or more spells or 5.4 percent of the labor force. On an industry basis, the highly seasonal construction sector accounted for about 20 percent of all those who spent more than 30 percent of the time unemployed accumulated in 3 or more spells. The 30 percent long-term criterion is, of course, judgmental. However, qualitatively similar results and conclusions are reached if other criteria are employed (20, 25, 35, 45, . . . percent).

On an industry basis we see in Table 5 that the construction, food and beverages and public administration sectors accounted for a disproportionate share of long-term unemployment. The latter sector consists generally of local and provincial government employees (largely unskilled construction, maintenance and service occupations) who frequently experience intermittent employment spells over time. Overall, the data suggest that a great deal of long-duration unemployment is found in those individuals who experience multiple spells of unemployment over time in industries that are seasonally oriented. For example in the food and beverage manufacturing sector, a great deal of long-duration unemployment is located in the fishing processing industry, which, by its nature is highly seasonal. In the services industry a great deal of extensive unemployment is found in industries in the hospitality sector, which normally exhibits a great deal of within-year employment variation. It would appear that a great deal of extensive unemployment is found in low skilled jobs. Examining the occupational distribution of long-duration unemployment (Table 6), there was a considerable concentration of unemployment in low-skilled, laboring occupations, although there were significant cases of its concentration in high-skilled workers, particularly tradesmen in the construction sector.

The above analysis has clearly indicated that the labor market is characterized by structural difficulties, particularly for a minority who spend a great deal of time unemployed and who account for a disproportionate time of total unemployment. However, it must also be recognized that there is considerable turnover or movement in the labor market. That is, there is also a large group of individuals who do reasonably well in the labor market. Each month in Canada some 500,000 individuals find jobs; of these about 150,000 are under the age of

25. These flows, however, are quite consistent with a disproportionate distribution of unemployment duration. Labor market gross flows data indicate that every month about 200,000 individuals move from employment to unemployment in Canada, implying a total movement of 2.4 million annually. With employment at roughly 11 million, a uniform distribution of unemployment would imply that each individual in the labor market would experience unemployment

Table 5. - The Distribution of Long Duration Unemployment by Industry, 1975-79:*

Industry	3+ spells		5+ spells
	% of unemployed	% of labour force	% of unemployed
Commercial, Business and Personal Services	18.7	20.7	12.7
Public Administration	11.5	5.8	11.7
Construction	19.6	12.4	22.9
Transportation Communications and Other Utilities	4.0	4.2	4.2
Trade	10.6	13.8	8.3
Finance, Insurance, and Real Estate	1.5	3.4	1.2
Manufacturing:			
Food and Beverages	7.8	4.1	10.0
Paper and Allied	5.2	2.1	3.6
Transportation Equipment	1.2	3.0	0.9
Wood Industries	2.4	1.9	2.2

Source: See Table 1.

* Individuals who spent in excess of 30 percent of the time unemployed and who had 3 or more spells over the period.

roughly once every five years (assuming a constant labor force). However, a significant number of individuals have long job tenure, significantly in excess of five years. About 30 percent of the currently employed have been with the same firm for more than 5 years. Essentially, the observed distribution of job tenure implies unemployment concentration and that it is concentrated among individuals who experience multiple spells over time.

Table 6. - Occupational Distribution of Long Term Unemployment:
Individuals Who Spent in Excess of 30 per cent of
Time Unemployed Over 1975-79 Period

Occupation	Percent of Total Long Duration Unemployed
Construction Occupations (871/873/878/879)	28.7
Food, Beverages and Related Processing and Preparation (821/822/612)	8.9
Material Handling (981)	5.7
Motor Transport Operating Occupations (917)	4.7
Forestry and Logging (751)	4.4
Sales Occupation, Commodities (513/514)	3.7
Fishing (713)	3.5
Other Clerical and Related ¹ (419)	3.4
Other Farming, Horticulture and Animal Husbandry ² (718/719)	3.0
Bookkeeping, Account Recording and Related (413)	2.5
Other Service Occupations ³ (619)	2.4
Mechanics and Repairers, n.e.c. (858)	2.1
TOTAL	73.0

Source: See Table 1. Occupational codes are in parenthesis (3 digit CCDO level). Sample consists of 63,108 individuals of whom 19,542 (18.7 percent) spent in excess of 30 percent of the time unemployed. Other significant long duration groups include: elementary and secondary teaching and related (1.4); stenographic and typing (1.8); material recording, scheduling and distributing occupations (1.1); reception, information, mail and message distributing (1.0); wood processing, except pulp and paper (1.0); metal shaping and forming, except machining (1.9); other product fabricating, assembling and repairing occupations (1.8).

¹ Consists mainly of general office clerks.

² Primarily low-skilled farm labour.

³ Largely janitors, cleaners and other low-skilled elemental work.

v

Conclusion

THE DISTRIBUTION OF UNEMPLOYMENT in the Canadian labor market tends to be concentrated among a minority of individuals who experience extensive periods of time unemployed and periodic unemployment spells. Using micro-longitudinal unemployment insurance data for the 1975–79 period, it was found that a considerable proportion of unemployment is accounted for by individuals who have multiple spells of unemployment over time. A large part of long-term unemployment is found in seasonal occupations. Youth and adult workers had basically the same observed aggregate distribution of unemployment duration by spell frequency. If anything, older workers have proportionately more unemployment experience concentrated in individuals with multiple spell frequencies. This tends to question the meaningfulness of the frequent empirical observation that one of the major sources of difference in the youth-older worker unemployment rate is employment instability, at least when viewed over relatively long time intervals. Finally, those who experience a great deal of unemployment would appear, by and large, to be making a great effort to be employed. For instance, to have lost six jobs in five years one must have first found six jobs.

Notes

1. Longitudinal data sets are those which contain information on the same individuals over time. The particular database employed contains historical microdata for a ten percent sample of all 'insured workers' in Canada for the 1975–79 period. This database currently contains about 3 million records. From this, random subsamples were drawn for purposes of analysis. The analysis considers only regular unemployment benefits and fishing claims. Other claim types such as maternity, sickness and retirement were excluded. There are strong conceptual reasons for considering individuals who receive such benefits as being outside the labor force. Also, weeks on claim under the Adult Occupational Training Act were also excluded since individuals receiving such benefits are on a training program and thus outside the labor force. Tests have indicated that exclusion of these groups does not change the results significantly.

2. George Akerlof, and Brian G. M. Main (1981). "Pitfalls in Markov Modeling," *Journal of Human Resources*, 1.

3. K. B. Clark, and L. H. Summers (1979). "Labor Market Dynamics and Unemployment: A Reconsideration," *Brookings Papers on Economic Activity*, 1. and Richard Disney, (1979), "Recent Spells and the Concentration of Unemployment in Great Britain," *Economic Journal*, (March). For Canada, see A. Hasan and P. de Broucker, (1982), "Duration and Concentration of Unemployment," *Canadian Journal of Economics*, (November).

4. In April 1980, the Department of Employment and Immigration (Ottawa) published the results of a survey concerning the labor force experiences of approximately 2,800 Canadian youths between the ages of 15 and 24 for the two-year period from October 1975 to September 1977. The survey determined that an extremely large proportion of all youth unemployment is

attributable to the fact that a few persons are out of work for very long periods of time on account of prolonged and repeated spells of joblessness as opposed to normal turnover. During the two-year period for which the survey was conducted, 21 percent of unemployed youths were without employment for more than 10 months and accounted for over 52 percent of the total time spent in unemployment by all youth.

5. In a panel discussion of Clark and Summers' BPEA paper (1979).

6. Norman Bowers, *The Dynamics of Youth Labor Flows: An Empirical Examination of Data from the Current Population Survey*, U.S. Department of Labor, (1980).

7. Close to 90 percent of the labor force in Canada are in insured employment. The remainder consists largely of self-employed workers, individuals over 65 and those who worked less than 20 hours per week. The sample selection criteria require that an individual have an employment or unemployment spell in both 1975 and 1979 in order to *normalize* for labor market attachment. This requires an individual to have one or more of the following in both the initial and terminating period: unemployment insurance claim; separation from an employer [that is, had a Record of Employment (ROE)]; insured U.I. earnings at or above the maximum (that is, was fully employed during the year).

8. Statistics Canada, *Patterns of Full- and Part-Time Employment and Unemployment: Results of the Annual Work Patterns Survey*, 1980. No. 71-531 (occasional). The AWPS provides an additional source of information on the distribution of unemployment duration for annual longitudinal periods. Similar to the results found using longitudinal UI data, the distributions on the basis of age tend to be quite similar. Youth joblessness tends to be concentrated to a large extent among a minority who spent a great deal of time unemployed. From the 1980 Annual Work Patterns Survey we find that 40 percent of male teenage unemployment are accounted for by those who are out of work more than 26 weeks during the year. This minority comprises about three percent of the youth labor force. This concentration would suggest that to a large extent the youth unemployment problem reflects a lack of employment opportunities. In 1980 the distribution for older (25-44) and younger (15-24) workers was found to be quite similar.

9. The age of an individual in the sample is that observed in 1975 (beginning of period).

10. This reflects to a considerable extent the relatively greater concentration of adult workers in high turnover seasonally-oriented industries, including construction occupations. For example, about 60 percent of construction workers are over 25 years of age.

11. Considered here are employment separations involving an unemployment spell.

Cooperation in Sociocultural Evolution

JUST AS SOME of the mathematical physicists and some of the astronomers are concerned with cosmology—the study of the inorganic world, its origins, its intrinsic constitution and its destinies—so some of the social scientists are concerned with the social evolution of human societies, their ultimate origins, nature, development and future. Of course, these problems are the business of professional philosophers, but they, grappling with all the new knowledge accumulated during the past century, welcome new visitors to their terrain and have yet to denounce them as trespassers.